

Claims

1. Anode active material slurry comprising:
- (a) a carbon-based anode active material, that is capable of lithium ion intercalation/ deintercalation;
 - 5 (b) a conductive agent;
 - (c) a binder comprising a styrene-butadiene-based polymer resin;
 - (d) a thickener comprising a cellulose-based or an acrylate-based resin;
 - 10 (e) a dispersant comprising a polymer backbone capable of surface-adsorption and a side-chain having non-ionic surfactant properties; and
 - (f) water.
- 15 2. The anode active material slurry according to claim 1, wherein the content of the dispersant ranges from 0.01 wt% to 10 wt% based on the total weight of the anode active material slurry (solid content).
- 20 3. The anode active material slurry according to claim 1, wherein the polymer backbone in the dispersant is polymethylmethacrylate (PMMA) or polyvinylidene fluoride (PVdF).
- 25 4. The anode active material slurry according to claim 1, wherein the side-chain having non-ionic surfactant properties in the dispersant is at least one selected from the group consisting of alkyl- and alkylaryl-polyoxyethylene ethers, alkylarylformaldehyde-
- 30 condensated polyoxyethylene ethers, block polymers having polyoxypropylene as an oleophilic group, polyoxyethylene ethers of glycerin ester, polyoxyethylene ethers of sorbitan ester, polyoxyethylene ethers of sorbitol ester, polyethyleneglycol fatty acid esters, glycerin esters,
- 35 sorbitan esters, propyleneglycol esters, sugar esters,

fatty acid alkanol amides, polyoxyethylene fatty acid amides, polyoxyethylene alkylamines, amine oxides, alcohol ethoxylates, polyethylene oxide (PEO-based materials), alkyl phenol ethoxylates, fatty amine
5 ethoxylates, glucosides, ethylene oxide-propylene oxide copolymers and alkanolamides.

5. The anode active material slurry according to claim 1, wherein the dispersant is a copolymer formed of
10 polymethylmethacrylate and polyethylene oxide.

6. The anode active material slurry according to claim 1, wherein the dispersant has a weight average molecular weight ranged from 10,000 to 30,000.
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7. A lithium secondary cell comprising an anode obtained by using the anode active material slurry according to any one of claims 1 to 6.